

SWBAT: define and calculate frequency and period

Jan 4-7:20 AM

Welcome!!!

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SECA Physics
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- * Pick up:
 - blue concept sheet
 - whiteboard, eraser, crayon
 - slip of paper (for later)



Opening Question:

How long would you guess it takes this pendulum to swing back and forth?

PROBABLY A SECOND

Centering

Sep 7-7:04 AM

Concept Sheet

~ 7 rows when we're done...

We'll fill in two terms (rows) today.

Concept	Meaning	Sym- bol	Units	Picture
FREQUENCY	HOW MANY PER UNIT OF TIME $\text{FREQ} = \frac{\#}{\text{TIME}}$	f $f = \frac{1}{T}$	hertz $\text{Hz} = \frac{1}{\text{sec}}$	
PERIOD	HOW MUCH TIME FOR ONE. $\text{PERIOD} = \frac{\text{TIME}}{\#}$	T $T = \frac{1}{f}$	seconds sec.	

Feb 18-6:50 AM

How long for each event

How much time for one.

Period (measured in seconds)

<http://en.wikipedia.org/wiki/Hertz>

TOP, MIDDLE, BOTTOM

1) Which one blinks most often?

BOTTOM

2) What is its frequency?

2.0 Hz

3) Least often?

TOP

4) Its frequency?

0.5 Hz

5) Which has the longest time between blinks?

TOP

6) What is its period?

2.0 s

7) What has the least time between blinks?

BOTTOM

8) Its period?

 $f = 2 \text{ Hz}$ $T = ?$

Apr 12-7:13 AM

Outrageous Acts of Science

A show about viral videos and the science that makes them possible...

"Popping Puppy" Dukes of Havoc #17

1. Just watch
2. Read the questions
3. Watch again
4. Discuss
5. Watch a last time to catch anything you might have missed



Oct 4-7:27 AM

Write some questions for the class:

$$f = \frac{\#}{\text{TIME}}$$

$$T = \frac{\text{TIME}}{\#}$$

* MY HEART BEATS 120 times in 1 MINUTE
NOUN VERB # HOW MANY? AMOUNT OF TIME

→ - How many hertz is that? $f = \frac{120}{60s} = 2 \text{ Hz}$
 - What is the period? $T = 0.5 \text{ s}$

* It takes for to
AMOUNT OF TIME NOUN VERB

- What is the frequency?
- What is the period?

* [Create your own kind of question about finding frequency or period.]

Apr 13-7:33 AM

Groups of 3:

$$\text{FREQUENCY} = \frac{\# \text{ TIMES}}{\# \text{ SECS}} \quad (\text{Hz})$$

$$\text{PERIOD} = \frac{\# \text{ SECS}}{\# \text{ TIMES}}$$

- * Find out everyone's names
- * What would you order to drink at a restaurant for lunch?
- * RATE the questions you get as EASY / MEDIUM / HARD
- * Pick one question to work on together and understand so that any member of the group could show the class how to do it.

Apr 13-7:47 AM

Daily 3 Questions

CP: Write your own word problem; then find frequency AND period.

- * Every day except test/project days
- * 3 Questions on the topics of the day
- * Main source of daily points
- * I am happy to give credit when I have no concerns about someone giving or getting help with the answers.

You can't get your points if you don't have your **NAME!!!**

Name	Period
1.	
2.	
3.	

Sep 9-7:32 AM

1) If my heart beats 120 times each minute (and a minute is 60 seconds), what is the **frequency** of my heartbeat in hertz?

2 Hz

2) FREQUENCY means how many per unit time.

3) What are the STANDARD UNITS for **period**?

sec.

Apr 12-7:15 AM